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Serial No. 09/739,477  
Docket No. NEC PF-2727  
Amendment B Under Rule 116**AMENDMENTS TO THE CLAIMS:**

Kindly cancel claims 3, 8 and 26, without prejudice. Please amend claims 1, 4, 7, 14, 19, 21, 25 and 32, as shown below.

This listing of claims will replace all prior versions and listings of claims in the Application:

**Claim 1 (currently amended):** A method of processing a nanotube, comprising the steps of:

contacting said nanotube with a reactive substrate having a defined edge;

causing a solid state reaction between a selected part of said nanotube and said reactive substrate by heating said reactive substrate so as to produce in said selected part a reaction product having a boundary aligned with said defined edge; and

separating said nanotube from said reaction product at said boundary by rapidly cooling said reaction product to define an end of said nanotube.

**Claims 2 - 3 (canceled)**

**Claim 4 (currently amended):** The method as claimed in claim [[3]] 1, wherein said reactive substrate is heated by an irradiation of a heat ray onto said reactive substrate.

**Claim 5 (original):** The method as claimed in claim 4, wherein said heat ray is an infrared ray.

**Claim 6 (previously presented):** The method as claimed in claim 3, wherein said reactive substrate is heated by applying a current between said reactive substrate and said nanotube.

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**Claim 7 (currently amended):** The method ~~as claimed in claim 1~~, of processing a nanotube, comprising the steps of:  
contacting said nanotube with a reactive substrate having a defined edge;  
causing a solid state reaction between a selected part of said nanotube and said reactive substrate so as to produce in said selected part a reaction product having a boundary aligned with said defined edge; and  
separating said nanotube from said reaction product at said boundary to define an end of said nanotube.

wherein said step of contacting said nanotube with said reactive substrate comprises the steps of:

dispersing said nanotube into an organic solvent to form a dispersion liquid;  
applying said dispersion liquid onto a surface of said reactive substrate; and  
evaporating said organic solvent from said dispersion liquid to leave said nanotube on said reactive substrate.

**Claim 8 (cancelled)**

**Claim 9 (previously presented):** The method as claimed in claim 1, wherein said nanotube is a single-walled nanotube.

**Claim 10 (previously presented):** The method as claimed in claim 1, wherein said nanotube is a multi-walled nanotube.

**Claim 11 (original):** The method as claimed in claim 1, wherein said nanotube is a carbon nanotube.

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**Claim 12 (original):** The method as claimed in claim 1, wherein said nanotube is a boron nitride based nanotube.

**Claim 13 (previously presented):** The method as claimed in claim 1, wherein said reactive substrate is a metal.

**Claim 14 (currently amended):** The method ~~as claimed in claim 13~~, of processing a nanotube, comprising the steps of:

contacting said nanotube with a reactive substrate having a defined edge;

causing a solid state reaction between a selected part of said nanotube and said reactive substrate so as to produce in said selected part a reaction product having a boundary aligned with said defined edge; and

separating said nanotube from said reaction product at said boundary to define an end of said nanotube.

wherein said reactive substrate is Nb.

**Claim 15 (previously presented):** The method as claimed in claim 1, wherein said reactive substrate is a semiconductor.

**Claim 16 (previously presented):** The method as claimed in claim 15, wherein said reactive substrate is Si.

**Claim 17 (previously presented):** The method as claimed in claim 11, wherein said reactive substrate is in a solid state.

**Claim 18 (canceled)**

**Claim 19 (currently amended):** The method ~~as claimed in claim 1~~, of processing a nanotube, comprising the steps of:

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contacting said nanotube with a reactive substrate having a defined edge;  
causing a solid state reaction between a selected part of said nanotube and said reactive  
substrate so as to produce in said selected part a reaction product having a boundary aligned  
with said defined edge; and  
separating said nanotube from said reaction product at said boundary to define an end of  
said nanotube.

wherein said defined edge is defined by a hole formed in said substrate.

**Claim 20 (original):** The method as claimed in claim 1, wherein said end of said nanotube is a top of said nanotube.

**Claim 21 (currently amended):** A method of forming a top of a nanotube, comprising the steps of:

contacting a nanotube with a solid state reactive substrate having a defined edge;  
carrying out a heat treatment of said solid state reactive substrate to cause a solid state reaction in a region of said nanotube and said solid state reactive substrate so as to produce in a selected part of said nanotube a reaction product having a boundary aligned with said defined edge of said solid state reactive substrate; and

separating said nanotube from said reaction product at said boundary by rapidly cooling  
said reaction product to define a top of said nanotube.

**Claim 22 (previously presented):** The method as claimed in claim 21, wherein said solid state reactive substrate is heated by an irradiation of a heat ray onto said solid state reactive substrate.

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**Claim 23 (original):** The method as claimed in claim 22, wherein said heat ray is an infrared ray.

**Claim 24 (previously presented):** The method as claimed in claim 21, wherein said solid state reactive substrate is heated by applying a current between said solid state reactive substrate and said nanotube.

**Claim 25 (currently amended):** The method ~~as claimed in claim 21~~, of forming a top of a nanotube, comprising the steps of:

contacting a nanotube with a solid state reactive substrate having a defined edge;

carrying out a heat treatment of said solid state reactive substrate to cause a solid state reaction in a region of said nanotube and said solid state reactive substrate so as to produce in a selected part of said nanotube a reaction product having a boundary aligned with said defined edge of said solid state reactive substrate; and

separating said nanotube from said reaction product at said boundary to define a top of said nanotube,

wherein said step of contacting said nanotube with said reactive substrate further comprises the steps of:

dispersing said nanotube into an organic solvent to form a dispersion liquid;

applying said dispersion liquid onto a surface of said solid state reactive substrate; and

evaporating said organic solvent from said dispersion liquid to leave said nanotube on

said solid state reactive substrate.

**Claim 26 (canceled)**

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**Claim 27 (previously presented):** The method as claimed in claim 21, wherein said nanotube is a single-walled nanotube.

**Claim 28 (previously presented):** The method as claimed in claim 21, wherein said nanotube is a multi-walled nanotube.

**Claim 29 (original):** The method as claimed in claim 21, wherein said nanotube is a carbon nanotube.

**Claim 30 (original):** The method as claimed in claim 21, wherein said nanotube is a boron nitride based nanotube.

**Claim 31 (previously presented):** The method as claimed in claim 21, wherein said solid state reactive substrate is a metal.

**Claim 32 (currently amended):** The method ~~as claimed in claim 31~~, of forming a top of a nanotube, comprising the steps of:

contacting a nanotube with a solid state reactive substrate having a defined edge;

carrying out a heat treatment of said solid state reactive substrate to cause a solid state reaction in a region of said nanotube and said solid state reactive substrate so as to produce in a selected part of said nanotube a reaction product having a boundary aligned with said defined edge of said solid state reactive substrate; and

separating said nanotube from said reaction product at said boundary to define a top of said nanotube,

wherein said solid state reactive substrate is Nb.

**Claim 33 (previously presented):** The method as claimed in claim 21, wherein said solid state reactive substrate is a semiconductor.

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**Claim 34 (previously presented):** The method as claimed in claim 33, wherein said solid state reactive substrate is Si.

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